

In the Claims:

- 1        1.    (currently amended) Procedure to increase the manipulation  
2           security for a bi-directional contactless data transmission  
3           by means of a first transmission and receiver unit (BA) and  
4           a second transmission and receiver unit (TR)
- 5           ●    wherein
  - 6           ●    the second transmission and receiver unit (TR), on  
7           receipt of a transmitted electromagnetic signal  
8           (fULmod) from the first transmission and receiver unit  
9           (BA), will convert this signal, with regard relative  
10          to at least one selected physical quantity that  
11          characterizes the signal, into a response signal  
12          (f'DLmod) and re-transmit the ~~same~~ response signal to  
13          the first transmission and receiver unit (BA), and
  - 14          ●    on receipt of the response signal (f"DLmod), the first  
15          transmission and receiver unit (BA) will convert this  
16          response signal with regard to the selected physical  
17          quantity thereof into a test signal (f"UL) such that  
18          this will compensate the conversion effected in the  
19          second transmission and receiver unit (TR), and
  - 20          ●    ~~finally~~, in the first transmission and receiver unit  
21          (BA) a comparison between the test signal (f"UL) and  
22          the transmitted electromagnetic signal (fUL) is  
23          effected, and
  - 24          ●    as a result (CF) of this comparison a value is  
25          assigned to a manipulation indication.

1       2.   (original) Procedure according to Claim 1 wherein it is  
2       investigated for the comparison within a time period  $t$ ,  
3       whether there is a fixed relationship with regard to the  
4       selected physical quantity.

1       3.   (original) Procedure according to Claim 1 wherein, if the  
2       result (CF) of the comparison is below a selected limit  
3       value, the manipulation indication is assigned the value 0.

1       4.   (currently amended) Procedure according to Claim 1 wherein  
2       this comparison (SP) will ~~preferably~~ be completed within a  
3       period  $t_1$  of 300ms max. following the transmission of the  
4       ~~original~~ transmitted electromagnetic signal ( $f_{ULmod}$ ).

1       5.   (original) Procedure according to Claim 1 wherein as a  
2       physical quantity for the comparison (SP) the phase,  
3       amplitude, or frequency of the test signal is used.

1       6.   (original) Procedure according to Claim 1 wherein data  
2       information is modulated onto the electromagnetic signal  
3       ( $f_{UL}$ ,  $f'_{DL}$ ) by means of frequency or amplitude modulation.

1       7.   (original) Procedure according to Claim 1 wherein the  
2       comparison (SP) is effected only by means of the frequency  
3       of the electromagnetic signal ( $f''_{UL}$ ,  $f_{UL}$ ).

1       8.   (original) Procedure according to Claim 1 wherein, in the  
2       second transmission and receiver unit (TR), the frequency

3 of the received electromagnetic signal ( $f'_{UL}$ ) is multiplied  
4 with a number ( $Z$ ), and, in the first transmission and  
5 receiver unit (BA), the frequency of the received  
6 electromagnetic signal ( $f''_{DL}$ ) is divided by this  
7 number ( $Z$ ).

1 9. (original) Procedure according to Claim 8 wherein the  
2 multiplication and division is effected by means of a ratio  
3 made up of two natural numbers.

1 10. (previously presented) Procedure according to Claim 7  
2 wherein, if the result (CF) of the frequency comparison is  
3 below a selected limit value, the manipulation indication  
4 is assigned the value 0.

1 11. (previously presented) Procedure according to Claim 8  
2 wherein, if the result (CF) of the frequency comparison is  
3 below a selected limit value, the manipulation indication  
4 is assigned the value 0.

1 12. (new) A method of carrying out a bi-directional contactless  
2 data transmission with increased security between a first  
3 unit and a second unit, comprising the steps:

- 4 a) emitting from said first unit a forward signal having  
5 an original value of a characteristic physical  
6 parameter selected from the group consisting of a  
7 frequency, a phase, and an amplitude;
- 8 b) receiving said forward signal in said second unit;

- c) determining a received value of said characteristic physical parameter of said forward signal as received in said second unit;
- d) modifying said received value of said characteristic physical parameter according to a defined first modification to produce a modified value of said characteristic physical parameter;
- e) generating and emitting from said second unit a response signal having said modified value of said characteristic physical parameter;
- f) receiving said response signal in said first unit;
- g) determining a returned value of said characteristic physical parameter of said response signal as received in said first unit;
- h) modifying said returned value of said characteristic physical parameter according to a defined second modification to produce a resultant value of said characteristic physical parameter;
- i) comparing said resultant value to said original value of said characteristic physical parameter to determine a difference therebetween; and
- j) responsive to and dependent on said difference, determining whether to block the data transmission between said first and second units.

13. (new) The method according to claim 12, wherein said characteristic physical parameter is said frequency.

1    **14.**   (new) The method according to claim 13, wherein said  
2           difference between said resultant value and said original  
3           value of said frequency is detected down to a frequency  
4           difference of 1 ppm.

1    **15.**   (new) The method according to claim 12, wherein said  
2           characteristic physical parameter is said phase.

1    **16.**   (new) The method according to claim 12, wherein said  
2           characteristic physical parameter is said amplitude.

1    **17.**   (new) The method according to claim 12, wherein said second  
2           modification reverses said first modification.

1    **18.**   (new) The method according to claim 17, wherein said first  
2           modification comprises multiplication, and said second  
3           modification comprises division.

1    **19.**   (new) The method according to claim 12, wherein said first  
2           modification consists of multiplication by a factor, said  
3           second modification consists of division by said factor,  
4           said step of modifying said received value consists of  
5           multiplying said received value by said factor, and said  
6           step of modifying said returned value consists of dividing  
7           said returned value by said factor.

1    **20.**   (new) The method according to claim 12, wherein said step  
2           of comparing said resultant value to said original value

comprises generating a test signal having said resultant value of said characteristic physical parameter, and comparing said test signal to said forward signal with respect to said characteristic physical parameter.

21. (new) The method according to claim 12, wherein said determining whether to block the data transmission comprises blocking the data transmission if said difference exceeds a predetermined threshold.

22. (new) The method according to claim 12, further comprising, in parallel or series with said steps a) to j), additional steps of transmitting an authorization code from said second unit to said first unit, and comparing said authorization code with a validation code in said first unit to determine whether to permit the data transmission between said first and second units.

**[RESPONSE CONTINUES ON NEXT PAGE]**